

XX.—Notes on some Fishes obtained at considerable Depths in the North Atlantic. By Dr. ALBERT GÜNTHER, F.R.S.

PROFESSOR WYVILLE THOMSON, before his departure with the 'Challenger' expedition, kindly placed in my hands for examination some fishes which had been obtained at considerable depths during the cruise of H.M.S. 'Porcupine' in the year 1869. In the first instance they had been sent for determination to the late Mr. Couch of Polperro, who affixed labels with names to the bottles; but no descriptions of the species were published by him; so that I should have omitted to allude to his nomenclature (which cannot be adopted), if I had not been informed that the fishes were enumerated under those names in one of the 'Porcupine' reports.

Small as the collection is, it is of interest in two respects:—

1. Inasmuch as it offers additional evidence that fishes hitherto known from more southern latitudes occur in the North Atlantic at a moderate depth (of between 80 and 200 fathoms)*.

2. Inasmuch as the fishes from the depth indicated do not yet show the well-known characteristics of deep-sea fishes developed in any degree. Therefore fishes like *Plagyodus*, *Melanocetus*, *Saccopharynx*, *Regalecus*, *Chiasmodus*, &c. must inhabit a much deeper horizontal zone (from 300 to 800 fathoms), as, indeed, has been supposed and affirmed for many years.

The first bottle is marked "No. 17. (18. 6. 69). 54. 10 N. 10. 59 W. 183 fms., muddy sand." Mr. Couch intended to describe the specimen contained in it as "*Macrourus linearis*."

This fish, which is not in good condition, crabs having eaten holes into various parts of the body, proves to be *Gadiculus argenteus*, described by Guichenot in 'Explor. Algér., Poiss.' 1850, p. 101, pl. vi. fig. 2, from specimens obtained at Algiers. I am not aware that the species has been noticed since; and therefore it is a point of interest to meet with it again in the North Atlantic. There is nothing whatever to indicate an affinity to *Macrourus*; indeed *Gadiculus* proves to be a *Gadus* slightly modified for living at a greater depth. Even the vomerine teeth, by the alleged absence of which, according to Guichenot, the genus was technically distinguished from *Gadus*, are present; but the scales, which are deciduous, and lost in our specimen, are larger than in the allied species of *Gadus*. The formula of the fin-rays is D. 9 or 10 | 13 | 18. A. 17 | 16. V. 6. The specimen is $5\frac{1}{2}$ inches long.

* See Ann. & Mag. Nat. Hist. 1867, xx. p. 289.

A second bottle (labelled "H.M.S. 'Porcupine,' between Shetland and Faroe, 200 faths. 1869," and determined by Mr. Couch as "*Macrourus*, sp. n.") contains an example, about 10 inches long, of *Coryphænoïdes norvegicus*. It agrees very well with Sundevall's excellent description published in 1840, which I can supplement by giving the number of dorsal rays as about 190, the tail of the specimen being perfect. There are eight or nine series of scales between the first dorsal and lateral line—and not four or five, as stated in the diagnosis of the 'Catal. Fish.' iv. p. 396, in accordance with Gaimard's figure of this species. Another, smaller specimen of the same species was in the third bottle, and stated to be from a depth of 540 fathoms.

The writing on the label originally placed on the third bottle has entirely faded and is illegible; but we are informed by a second label in Mr. Couch's handwriting that the bottle contains a "*Kurtus* and *Macrourus*, both new. 1869. 540 fathoms." The latter specimen has been noticed above. The former, of course, is widely different from the Indian genus to which Mr. Couch referred it, and is, in fact, *Argyropelecus hemigymnus*, a species common in the Mediterranean and neighbouring parts of the Atlantic.

A small fourth bottle contains only one specimen; it is labelled, in Mr. Couch's handwriting, "*Ophidium*—eel-like, deep sea—1869. H.M.S. 'Porcupine.' 180 faths." This specimen is the young of *Anguilla Kieneri*, a species hitherto known from the Mediterranean only.

The fifth bottle (labelled "H.M.S. 'Porcupine.' Between Shetland and Faroe. 180 faths. 1869") contains four specimens, named by Mr. Couch

Macrourus linearis, C.,
Blennius fasciatus, C.,
Gobius Jeffreysii,
Callionymus sagitta, C.,

and which I have determined as

Motella macrophthalma, Gthr.,
Blenniops Ascanii, Walbaum,
Gobius Jeffreysii, Gthr.,
Liparis vulgaris, Flem.

It was evidently by a slip of the pen that Mr. Couch applied the name "*Macrourus linearis*" again to a very different fish, viz. *Motella macrophthalma*, a species which, together with *Gobius Jeffreysii*, was described and figured by me in this Journal, 1867, xx. p. 290.